

This includes comparing genes, genomes and proteins. The subject aim of comparative evolutionary phylogenomics is to determine the evolutionary phylogenomics. i.e. phylogenomics.

Genomics

Structural Genomics

- genome mapping
- genome sequencing
- genome manipulation

Comparative Genomics

→ Microbial genomics

Subfunctional Genomics

- Transcriptomics
- Proteomics
- Metabolomics
- Metabonomics

→ Animal Genomics

→ Plant Genomics

→ Phylogenomics

January '22

Su	Mo	Tu	We	Th	Fr	Sa
30	31	1				
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

December '21

Week-49 (2021/22)

Genomics is the study of the entire genome of an organism. Genomics can be divided into three categories —

1) **Structural genomics**, also known as classical genomics, dedicated to the study of the structure of the genome and genetic mapping, physical mapping and the complete genome sequencing is done. the sequencing of the whole genome

2) **Functional genomics**, deals with the functional aspects of the genes and proteins. It is a very important part of genomics. It is a field of molecular biology that deals with the comprehensive analysis of the functions of the entire genome, understanding the functions of genes and standing other parts of the genome.

3) **Comparative genomics** compares a no. of genomes —

- i) **Transcriptomics** (gene expression)
- ii) **Proteomics** (protein expression)
- iii) **Metabolomics** / Metabolonomics

4) **Comparative genomics** :- The comparative genomics is used to compare genomes of different organisms

December '21

Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Genomics and Proteomics.

Genomics :- Genomics is being extensively used by the biologists and it has fetched much attraction among the scientific community. It has been derived from the word genome. (genes and chromosomes).

The complete set of DNA of an organism is called as genome. The genome constitutes the complete hereditary information of an organism that is passed on to the next generation. The hereditary information contained in a genome is encoded in its DNA.

The size of the genome varies widely, eg- the smallest genome contains only 500,000 base pairs of a bacterium whereas in case of human it is 3 billion.

January '22						
Su	Mo	Tu	We	Th	Fr	Sa
30	31					1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

We cannot direct the wind but we can adjust the sails. - Anonymous